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ABSTRACT

The Planning and Research Branch is a service branch of Alberta Education which provides information to planning and policy makers within Alberta Education to assist in making realistic decisions about educational directions and programs. This guide presents information about the operation of the Branch and reports in capsule form on a selection of research projects completed from July 1, 1979 through June 30, 1980. Abstracts describe the purpose, design, findings, conclusions, recommendations, bibliographic information, and distribution of each research project. Topics researched included: (1) second language instruction; (2) alternative schooling; (3) computer assisted instruction; (4) elementary school mathematics; (5) energy conservation; (6) bilingual programs; (7) gifted children; (8) enrollment projections; (9) female students' participation in physical activities; (10) pupil transportation; (11) special education; (12) inservice education; and (13) work experience programs. (CJ)

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1979-80

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FOREWORD

This is the fifth edition of Annual Research Highlights published by the Planning and Research Branch. Its primary purpose is to provide a guide to the operation of the Branch and to report in capsule form on a selection of research projects completed through contract with or by the Branch over a one-year period (July 1, 1979 to June 30, 1980).

The first edition of Annual Research Highlights contains abstracts of selected studies completed from the time the Research and Planning Branch was first organized in 1974 to the end of June, 1976. The second, third and fourth editions contain abstracts of studies completed between July 1 and the following June 30 in 1976-77, 1977-78, and 1978-79 respectively. These publications provide information about a selection of research studies which were undertaken by classroom practitioners, school systems, and educational organizations and which relate directly to some aspect of basic education (ECS to Grade 12) in Alberta since the Branch's inception.

THE PLANNING AND RESEARCH BRANCH

Branch Organization

The Planning and Research Branch is a service branch of Alberta Education which provides information to planning and policy-makers within Alberta Education to assist in making realistic decisions about educational directions and programs. The Branch also provides information through Alberta Education to the education community.

The Branch is divided into two sections. A policy section identifies existing and future problems and generates policy alternatives, and a research section carries responsibility for coordinating research and disseminating the results of this research to appropriate users.

How Are Studies Handled?

Over two-thirds of the projects undertaken by the Branch were initiated by school boards, related educational organizations, universities, colleges or school business officials. The remainder were commissioned by Alberta Education as internal management studies or as projects undertaken in cooperation with other departments or provinces.

With the exception of those studies which are carried out by the Planning and Research Branch staff for internal management purposes, all studies and projects are handled by contract. Contracts are entered into with incorporated individuals, organizations and institutions. For example, in a classroom-based project or study undertaken by a teacher, the contract would be between the school board and Alberta Education.

All projects must provide for an adequate evaluation component. Proposals should include a description of how they are to be evaluated and include an adequate budget for evaluation.

All research projects and studies are supervised by a liaison officer from the Planning and Research Branch. For all contracted projects, a steering committee is appointed.

How Are Studies Selected for Funding?

The study must:

1. Relate directly to some aspect of basic education in Alberta;
2. Focus primarily on applied or developmental research as opposed to basic research;

3. Have a researchable component which tests new ideas, new methods, new program delivery techniques and/or new administrative and management practices which will improve services to the child in the classroom;
4. Have applications for other school systems in Alberta;
5. Lead to results that are potentially cost-effective, in the following order:
 - i. better service at less cost
 - ii. better service at the same cost
 - iii. equivalent service at less cost
 - iv. better service at a marginally increased cost;
6. Lead to minimal implementation and on-going costs;
7. Reflect provincial priorities.

Research Priority Areas

Provincial priorities change from time to time in order to reflect both emergent and long term needs. Some current priorities include the following:

1. Exceptional Children (problem learners, gifted students and others)
 - a. Assessment techniques and procedures (identification, screening and diagnosis)
 - b. Program innovations: development and implementation
 - c. Evaluation: programs and student progress
2. Pupil Instruction, Learning and Growth
 - a. Alternative patterns of instruction
 - i. work experience, work study and special projects
 - ii. other
 - b. Conditions for learning
3. Pupil, Program and School Evaluation
 - a. Cost studies (e.g., benefit, utility, and effectiveness)
 - b. Conditions for learning
 - c. Teaching methodology and outcomes
 - d. Student achievement assessment programs
 - e. Teaching effectiveness studies
4. Use of Technology--Feasibility, Practicality and Appropriateness of:
 - a. New equipment
 - b. New and improved programming (software)

- c. Effective application and use of equipment and software
- 5. The Improvement of Local Planning and Management Capabilities
 - a. Futures planning
 - b. Resource management (personnel, facilities, finances)
 - c. Program needs assessment (non-instructional services)
 - d. Program evaluation (non-instructional services)

In general, more favorable consideration is given to those requests for funding which provide for a commitment of human and financial resources from the applicants.

How Can You Access Research Funding?

There are basically two steps in applying for financial support.

1. An applicant should submit a brief prospectus summarizing the needs, purpose, general methodology, expected outcomes and budget requirements of the project.
2. If the prospectus meets general criteria and overall priorities, the applicant will be advised to develop and submit a detailed proposal.

Who Do You Contact?

Dr. M. R. Fenske, Director, Planning and Research Branch, Alberta Education, 9th Floor Devonian Building (West Wing), 11160 Jasper Avenue, Edmonton, Alberta, T5K 0L2.

1979-80 RESEARCH PROJECTS

INTRODUCTION

A majority of the following research projects were initiated in response to the needs of decision-makers who must resolve educational problems and/or concerns. They were brought to the attention of the Planning and Research Branch by school boards, other branches of Alberta Education and other educational organizations. The Branch continued to give priority to studies proposed by the practitioner to improve service to the child in the classroom and lead to results that are potentially applicable to all classrooms in the province.

The reader will note that each summary contains information about the distribution of copies of the study. The best procedure to obtain a copy of a study would be to contact a school in your area, or association libraries such as the Alberta Teachers' Association, the Alberta School Trustees' Association and the Alberta Federation of Home and School Associations, the libraries of provincial secondary institutions, or Regional Offices of Education. The Planning and Research Branch also has a limited number of copies of some of the project reports which are available as long as supplies last.

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ADDITIONAL COSTS OF SECOND LANGUAGE INSTRUCTION

Purpose

The primary purpose of the study was to identify and explain additional costs incurred by Alberta school jurisdictions providing second language instruction in 1978. "Additional costs" were defined as those which would not have been incurred had the second language program not existed.

Design

Costs were analyzed according to the following dimensions: second language (French, Ukrainian, German), program type (core, extended, bilingual, immersion), program stage (development, implementation, maintenance), instructional level (elementary, junior or senior high), school size and school setting (urban, rural).

Questionnaires and interviews with school board officials were used to collect data, which was then compiled and analyzed according to the above-mentioned data. Although questionnaires were sent to all 23 jurisdictions offering second language instruction, detailed analysis was done on five school systems which were selected as a cross section.

Findings

The study revealed considerable diversity among programs, both within and among boards, with regard to: staffing patterns, ancillary services provided, and developmental effort expended. The total additional cost, for all second language programs provided in 1978 by the five school boards in the sample, was \$1,412,718.

Recommendations

The study recommended further investigation into teacher costs and the impact of second languages in school organization. It suggested that this study be replicated in future, that a 3 to 5 year study be done to find out about long-term costs, and that a study be done of costs for a "model" (ideal) second language program.

Bibliographic Information

Deloitte Haskins and Sells Associates, with N. McEwen, Additional Costs of Second Language Instruction, Alberta Education, November 1979. Main Report, 147 pages; Summary Report, 14 pages.

Distribution

This study was distributed to school superintendents and secretary-treasurers of school boards in Alberta, to Alberta universities and faculties of education, and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, ERIC Document Services and Micromedia.

ALTERNATIVE SCHOOLING FOR ADOLESCENTS

Purpose

The purpose of this report was to summarize the reports of and draw some conclusions from two similar projects in alternative schooling for adolescents: Project REACH at Harry Collinge High School in Hinton, Alberta (1976-77) and Project Experience in Rocky Mountain House School Division (1975-78). Both projects were located off-campus and were directed to students who were not succeeding in the regular school program.

Design

The writer identified some of the most notable characteristics of the projects and attempted to describe their overall successes and failures. The report concludes with a few recommendations for school systems wishing to implement similar projects.

Findings

These two experiments in alternative schooling seemed to indicate that successful and/or reluctant students can benefit attitudinally (and sometimes in terms of skill development as well) from such programs. However, careful planning and administration would be necessary in order to avoid the many problems that these pilot projects experienced. Difficulties arose in pre-planning, identification of program focus, selection of students and teachers, support systems, communication/public relations, and follow-up procedures.

Bibliographic Information

Anita Jenkins, Alternative Schooling for Adolescents, Alberta Education, 1980. 25 pages.

Distribution

The report has been sent to all Alberta junior and senior high schools, superintendents of schools, and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, faculties of education in Canada, the ERIC document service and Micromedia.

A PRACTICAL APPROACH TO COMPUTER BASED INSTRUCTIONAL SUPPORT

Purpose

The study explored the potential of the use of Computer Based Instructional Support (CBIS) by classroom teachers. (CBIS is intended to relieve the teacher of some of the administrative work which arises from increasingly individualized instruction.)

Design

The research began with a review of current literature. However, since little research regarding such an application of computers has been done in North America or the United Kingdom, the researchers went on to interview selected teachers and principals to determine a preliminary list of potential applications of CBIS. The researchers reviewed this list in consultation with Alberta Education staff and a questionnaire was sent to a province-wide sample of Alberta teachers.

Findings

The above process seemed to identify three major potential CBIS applications--student records (accessible within the schools), and learning aid references and a test-item bank (both of which would be accessible throughout the province). The researchers concluded that other applications either were not suitable for computerization or were not perceived as important by teachers (who were surprisingly consistent in their responses to the questionnaire).

Consultations with computer manufacturers revealed that three basic approaches to computerization are available: fully centralized, partially decentralized, and fully decentralized. The entry cost for CBIS is approximately \$5 million for a relatively limited range of applications.

Conclusions

Before a final decision could be made regarding the practicality of CBIS, the results of this study must be consolidated with two other concurrently run studies of computerization, which dealt with Computer Assisted Instruction and Computer Managed Instruction.

If the use of computers in schools for various purposes is carefully planned, the benefits of CBIS may well be accessible at a reasonable cost.

Recommendations

The study recommended that Alberta Education should:

- Examine the total requirements for computer power within all schools and school boards throughout Alberta, as well as requirements which Alberta Education may have. This would provide the framework for planning and growth of computerization.
- Determine the current level and quality of computerization which already exists in these institutions. This provides the basis for determining what must be done to meet the identified overall requirements.
- Formulate a policy to guide the growth of computerization within educational institutions.
- Establish a pilot project within one school board in order to review and confirm costs and benefits.
- Confirm the feasibility of CBIS and determine the level of computerization which must be achieved before it can be implemented.

Bibliographic Information

A. Brown, L. Anderson, and D. A. Louth (Currie, Coopers and Lybrand, Ltd.), A Practical Approach to Computer Based Instructional Support Alberta Education, January 1980. 95 pages.

Distribution

The report was distributed to all Alberta schools, school superintendents, board chairmen, Alberta universities and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, ERIC Document Services and Micromedia.

THE CARNEGIE UNIT: PROS, CONS AND ALTERNATIVES

Purpose

This study is a review of the literature on the Carnegie Unit (the major method used to assess the progress of students through senior high schools in Alberta) and on some alternative approaches.

Findings

The researcher explained the Carnegie Unit system, identified 11 advantages and 8 disadvantages of its use, and described 6 alternative approaches. The alternatives were: (a) the point system or unit counting system, (b) challenge or equivalency tests, (c) minimum competency testing, (d) the performance contracting concept, (e) learning contracts, and (f) a computerized test item banking service.

Conclusions

The study concluded that all alternative systems have serious limitations, but the use of some facets of these could serve to modify the Carnegie Unit system, so that in Alberta high schools "time spent" would not be more heavily emphasized than "knowledge acquired."

Bibliographic Information

Peter J. Baker, The Carnegie Unit: Pros, Cons and Alternatives, Alberta Education, January 1980. 33 pages.

Distribution

The report was distributed to the Curriculum Policies Board and sent out on request.

ELEMENTARY MATHEMATICS TESTING PROJECT

Purpose

This study of elementary mathematics testing was intended to answer the following questions:

1. To what extent are elementary school students demonstrating achievement of the mathematics objectives as outlined in the 1977 program of studies?
2. Has there been any significant change in levels of student achievement as measured by tests given in 1978 and 1979?
3. To what do teachers attribute low achievement scores in mathematics?
4. Is the student achievement level related to school starting age?
5. Could computerized printouts of individual students' school and system results be used for diagnostic and management purposes?

Design

Tests based on the 1977 mathematics program objectives were developed and administered in Zone 1, the northernmost part of Alberta. Data was analysed at the University of Alberta. To help answer question #3 above, a questionnaire was sent to each teacher of elementary school mathematics in Zone 1. To answer question #5, the researcher interviewed teachers, principals and supervisors.

Findings

The questions above were answered as follows:

1. Few objectives showed a high level of mastery (80 percent of student achieving 85-100 percent scores). Also, high achievement occurred less often as grade level increased.
2. A significantly higher proportion of the students showed a high level of mastery in 1979, as compared with 1978.
3. The teachers in Zone 1 attributed failure to reach a high level of mastery in mathematics primarily to the failure of the textbooks to match the program objectives and the inadequate learning skills of the pupils.

4. At the primary level, performances were not significantly different for "early or late starters"; but at the upper elementary level (grades 4 to 6), "late starters" significantly outperformed their younger counterparts in most areas.

At all grade levels, girls performed consistently better than boys on the "Operations and Properties" strand. Boys and girls, however, had equally low performance levels on problem solving.

5. The major use for the computer printouts of results, in actual practice, has been for comparison between schools and school systems.

Conclusions

The report concludes that since mathematics performance levels in Zone 1 do not appear to be very high, further research should be done to determine the causes of these performance levels.

Bibliographic Information

A. L. Anderson, Elementary Mathematics Testing Project - Zone 1, Alberta Education, March 1980. 40 pages.

Distribution

The report was distributed to school superintendents, selected elementary school principals, Alberta universities and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, ERIC Document Services and Micromedia.

ENERGY CONSERVATION: ENERGY MANAGEMENT

Purpose

The purpose of the study was to develop an energy management program which would minimize energy consumption in Grande Prairie School District facilities while maintaining an environment conducive to the teaching process.

Design

The first year of the project was spent in analyzing energy use, testing conservation measures, conducting a literature search, surveying energy use in Alberta school systems, and developing the energy management concept, while the second year of the project was spent in implementing a comprehensive energy management program for Grande Prairie School District.

The report is divided into two major sections. The first deals with the basic concepts of energy management for schools--principles and approaches proven through experience. The second describes the development of energy management techniques in Grande Prairie Public School District.

Findings

The researchers concluded that significant dollar and energy savings can be obtained through energy management--if the program has the support and co-operation of all school system personnel and if an individualized and carefully planned program is designed for each school system.

Recommendations

The primary recommendation was that an in-house energy management consulting team be established to assist Alberta school systems.

Bibliographic Information

Faculty of Environmental Design, University of Calgary.
Energy Conservation: Energy Management. Alberta Education,
October 1979. Summary Report, 22 pages; Full Report, 114
pages.

Distribution

The report has been distributed to Alberta superintendents of schools, and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, the faculties of education in Western Canada, the ERIC document service and Micromedia. The summary report has also been sent to all Alberta school board chairmen and secretary-treasurers.

EVALUATION OF BILINGUAL (UKRAINIAN-ENGLISH) PROGRAM (EDMONTON CATHOLIC SCHOOL DISTRICT)

Purpose

The study was designed to evaluate the following three problem areas associated with the implementation and operation of a bilingual program: (a) pupil academic achievement, (b) pupil cultural appreciation, and (c) attitudes of relevant groups towards the bilingual program.

Design

Students in the bilingual program were matched with control students in the regular program on the basis of selected variables. Individually administered and group achievement tests were given to both groups, and results were compared. Questionnaires were used to determine the perceptions of parents, teachers, principals and students with regard to the bilingual program.

Findings

1. According to test score results, students in the Ukrainian-English bilingual program achieved as well in English language arts and mathematics as did students in the regular program.
2. Ukrainian language and skills test results showed that students made very significant progress in learning Ukrainian.
3. According to the perceptions of parents and teachers, students had acquired an appreciation of Ukrainian culture.
4. Attitudes of parents, students, teachers and principals toward the bilingual program were very positive. These results indicated that participation in a bilingual program: (a) does not hinder student academic progress in the first language of instruction, and (b) may have a positive effect on pupil cultural appreciation. The results also show that elementary level students can make significant progress in learning a second language when it is used as a language of instruction.

Bibliographic Information

E. Ewanyshyn, Evaluation of a Ukrainian-English Bilingual Program, 1978-79, Alberta Education, 1980. 63 pages.

Distribution

The report will be distributed to all Alberta superintendents of schools, and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, faculties of education in Western Canada, the ERIC document service and Micromedia.

EVALUATION OF BILINGUAL (UKRAINIAN-ENGLISH)
PROGRAM (EDMONTON PUBLIC SCHOOL DISTRICT)

Purpose

This annual evaluation of the bilingual (Ukrainian-English) program in the Edmonton Public Schools is conducted to determine: (a) the bilingual program students' achievement in mathematics, English and Ukrainian, (b) the attitudes of parents and program personnel towards the program, and (c) the reasons for student withdrawals. This year, 1979, the appropriateness of curriculum objectives and late-entry student policy were also examined.

Design

1. Bilingual program students were compared with a random sample of regular students on achievement in reading and mathematics.
2. Program students in the four grades were given a pre- and post-test in Ukrainian language.
3. The students' appreciation of the Ukrainian culture was assessed by both parents and teachers.
4. Questionnaires on reactions to the program were sent to parents and program personnel.
5. A questionnaire was sent to the parents who withdrew their children from the program.
6. Discussions with the program consultant and the Second Languages supervisor supplied other relevant information.

Findings

The bilingual program students in Grades 2, 3, and 4 achieved as well as students in the regular program on standardized reading and mathematics tests. The Grade 5 bilingual program students achieved significantly better than the regular program students. Test results indicated that the bilingual program students are also acquiring a degree of proficiency in the Ukrainian language.

The majority of parents were satisfied with their child's English and Ukrainian academic progress and with the program generally.

The majority of bilingual program teachers and principals thought their students were an integral part of the school and were happy in the program.

Questionnaires indicated that 26 percent of students who left the program did so because their parents moved. Another 39 percent of the children who left did so mainly because of difficulty with English language or Ukrainian language studies. The remaining 35 percent of the questionnaires were not returned.

Late-entry students performed as well as or better than their classmates, and a late-entry policy, with restrictions, was favored by the majority of principals and program teachers.

Recommendations

1. The bilingual Ukrainian-English Program should be continued in Grade 6.
2. Plans should be made to expand the Ukrainian-English Program to the junior high level.
3. An attempt should be made to determine why the Grade 4 Ukrainian Oral Expression and the Grade 5 Ukrainian Listening Skills scores did not improve significantly from September 1978 to May 1979.
4. Teachers should be provided with assistance to improve students' Ukrainian speaking and writing skills.
5. More inservice should be organized for program teachers.
6. Additional Ukrainian reading materials such as library books are needed.
7. Attention should be given to the recruitment of more students for the program.

Bibliographic Information

J. Jones, Evaluation of the Bilingual (Ukrainian-English) Program, 1978-79, Alberta Education, 1980. 37 pages.

Distribution

The report will be distributed to all Alberta superintendents of schools, and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, faculties of education in Western Canada, the ERIC document service and Micromedia.

GIFTED CHILDREN

Purpose

The project was designed to identify gifted children in Willow Creek School Division and implement an enrichment program designed to meet their needs and challenge their potential.

Design

The project: (a) assisted teachers and parents of gifted children, and (b) developed a "bank" consisting of all forms of media and human resources which could provide enrichment to gifted children.

A comparison group from a school system of comparable size (Mountain View) was used to evaluate the outcomes of the program. Eleven children were selected, using specific criteria, in each of the program and comparison jurisdictions. The enrichment program was conducted in the regular classroom. Pre- and post-tests were administered to each group.

Findings

Objective results lend partial support to improvement in performance for gifted children in the enrichment program. The comparison group showed significant losses in spelling and reading as measured by one test of achievement, but there was little or no significant difference on the other tests administered. As expected, both groups gained in security scores and consistency scores on the Institute of Child Study Security Test. Teachers appeared to become more sensitive to the needs of these children (in the project group). The project group lost significantly in the area of self-acceptance.

This finding suggests that the project may have created expectations in the children which made them more introspective.

Project teachers reported that exposure to resource materials was useful for all children in the classroom. Parents and students supported the program, but parents asked for more communication with the school.

Recommendations

1. Funding should be made available for further research into the education of gifted children.

2. Any enrichment program should have a consultant to provide leadership and evaluation.
3. The enrichment program should continue in the Willow Creek School Division.
4. In-service education should be a component of any enrichment program.
5. Identification of gifted children should be done carefully.
6. Multiple measures should be used for evaluating the outcomes of an enrichment program.
7. Resources for gifted children should be available centrally in a school system for teacher use.
8. Special attention should be given to the matter of communication with parents.
9. Teachers should be given time to develop materials for gifted children.

Bibliographic Information

Garnet W. Millar, Gifted Children, Alberta Education, September 1979. Summary Report, 23 pages. Full Report, 229 pages.

Distribution

The report was distributed to Alberta superintendents of schools and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, and faculties of education in Alberta. The summary report was also sent to all Alberta schools and MLA's.

GRANDE PRAIRIE AREA SCHOOL ENROLMENT PROJECTIONS

Purpose

The primary objective of this study was to develop school enrolment forecasts for the three school districts in the Grande Prairie region over the next 15 years (1980-1995).

Design

The forecast methodology was primarily a combination of approaches based on past enrolment figures and anticipated population growth for the region.

Findings

Although the forecast was done for 15 years, a comfortable level of confidence in the data exists only for the first five years, to 1985.

In all school districts, enrolment growth was expected to be most pronounced between 1980 and 1985, reflecting the pattern of resource development and population increases expected in the Grande Prairie region. The average annual compound rate of change for the area, from 1979 to 1985, was predicted to be about 3.3 percent. After 1985, enrolments are expected to continue increasing, but at a slower rate.

Conclusions and Recommendations

The forecasts were considered good indications but certainly subject to change with unforeseen occurrences. Therefore, to be useful, these figures should be reviewed and adjusted every two years. To develop good enrolment forecasts, it was recommended that municipalities conduct accurate census counts annually.

Bibliographic Information

Hollinshead, Lefrancois and Associates, Grande Prairie Area School Enrolment Projections, Alberta Education, February 1980. 65 pages.

Distribution

The report was distributed to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, ERIC Document Services and Micromedia.

PHYSICAL ACTIVITY PARTICIPATION OF ADOLESCENT GIRLS

Purpose

The purposes of the study were threefold:

1. To determine if adolescent girls' participation in physical activity differs with grade, and if so, at what grades differences occur.
2. To determine what variables are related to physical activity participation of adolescent girls.
3. To obtain descriptive information about adolescent girls' feelings toward physical education and physical activity.

Design

The two-year study used pre- and post-tests of a random sample of all Grades 6 to 10 girls in the Edmonton Catholic School system. The study also used multivariate analysis of variance of: (a) six participation variables--number of interschool teams, number of intramural activities, number of community-organized activities, number of total recreational activities, average hours per day spent in recreational activities, and frequency of participation in four favorite activities, and (b) related variables such as personal attributes, socialization variables, and variables measuring expectancies and reinforcement for participation.

Findings

Total participation decreased as grade level increased but participation in community-organized and recreational activities remained constant. Participation in school-related activities was found to be most related to personal attributes, while community and recreational activities were most related to social influences, socio-economic status and opportunities (availability of equipment).

Recommendations or Implications

1. Because total participation in physical activity decreases with grade, other activities that replace physical activities should be investigated, along with the reasons why these activities take priority over physical activities.
2. Opportunities available to senior high school girls for intramural and interschool participation should be investigated. Every effort should be made to ensure that

intramural and interschool programs are available to all girls who desire them.

3. Reasons why adolescent girls continued to participate in community-organized activities and recreational activities should be investigated. The desirable aspects of these types of programs should be included in school-related programs and physical education classes.
4. The factors contributing to movement satisfaction should be studied. Physical education programs should encourage the development of movement satisfaction.
5. Recreational and community programs should strive to provide low-cost programs that would be feasible for girls from lower socio-economic backgrounds.
6. In physical education programs, an attempt should be made to make fitness activities more enjoyable to adolescent girls.

Bibliographic Information

Janice Butcher, Physical Activity Participation of Adolescent Girls, Alberta Education, September 1979. 17 pages.

Distribution

The report was sent to all Alberta superintendents of schools, and to libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, and faculties of education in Alberta.

PLANNING AND ANALYSIS NEEDS FOR PUPIL TRANSPORTATION

Purpose

In order to promote better planning, better policy formation, more timely implementation and consequently improved pupil transportation service in the province, this study was commissioned. Its objectives were:

1. To identify areas of potential deficiencies in the process which is currently being used to plan and operate pupil transportation systems.
2. To evaluate these needs and identify information or analytical techniques which would assist in alleviating these deficiencies.

Design

The study method consisted of: in-depth interviews with selected pupil transportation supervisors; distribution of a brief questionnaire to interested delegates at the fall 1978 Alberta School Trustees' Association conference in Edmonton; distribution of a more detailed survey form to all school jurisdictions in the province; and identification of planning and a literature search of published material dealing with pupil transportation management.

Findings

1. About 75% of the respondents to the survey were rural school boards with low population densities. These boards expressed several consistent concerns and appeared to be having problems meeting the current guidelines for the Alberta Education Grant Assistance Program.
2. There is apparently a need for:
 - policy guidelines for the provision of pupil transportation services, and well defined roles, duties, and responsibilities for the administration of pupil transportation;
 - more detailed transportation impact evaluation when the location of a new school is being decided;
 - service criteria to be used by all school boards for planning, monitoring, and evaluating pupil transportation service;
 - a consistent and systematic approach for planning school bus routes;

- methodology for quickly and accurately evaluating the impact of alternative routing concepts;
- data which will assist school boards in planning pupil transportation budgets for periods of up to five years;
- periodic seminars where information concerning pupil transportation matters can be discussed;
- appropriate training programs for all drivers, whether board-based or contractor-hired;
- acceptance of the principle that marginal changes to school operations should be made where the trade-off involves substantial improvements to the efficiency of pupil transportation systems;
- procedures and criteria for monitoring and evaluation of existing pupil transportation services.

Conclusions

1. Resolution of the above needs could in most instances be accomplished by dissemination of transportation information to all school boards in the province and by the rigorous application of existing and suggested pupil transportation management techniques.
2. Considering the current state-of-the-art of route planning and design in the province, improvement and refinement of the manual currently used in route planning and design would appear to offer more immediate benefits than the development of a computerized bus-routing model.
3. Immediate development works is needed in data storage and retrieval and in forecasting of student numbers.
4. Improved route design and operational procedures would be beneficial to most, if not all, of the school jurisdictions surveyed.

Bibliographic Information

Stanley Associates, Planning and Analysis Needs for Pupil Transportation, Alberta Education, May 1979. Summary Report, 5 pages. Full Report, 116 pages.

Distribution

The report was distributed to all Alberta school board chairmen, and the libraries of the Alberta School Trustees' Association, Alberta Teachers' Association, Regional Offices of Education, faculties of education in Alberta, the ERIC documentation service and Micromedia. The summary report was also sent to Alberta school superintendents and secretary-treasurers.

THE PREP PLAY PROGRAM

Purpose

This publication provides information for teachers and others who are implementing the PREP program, which is play skill instruction for young retarded children. The program consists of an ordered set of task-analyzed instructional sequences designed to facilitate the assessment, selection and teaching of motor skills. There are three major aspects to the program: individualized instruction in selected play skills, small group activity to facilitate the practice of play within a stimulating, free environment.

This program was developed and field-tested by staff members of the Department of Physical Education at the University of Alberta. For information about the field testing, see PREP Field Test Project: Final Report.

Bibliographic Information

C. J. Watkinson and A. E. Wall, The PREP Play Program, Alberta Education, 1980. 188 pages.

Distribution

The report will be sent to Alberta superintendents of schools, and to libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, faculties of education in Alberta, the ERIC document service and Micromedia.

PREP PROGRAM FIELD TEST PROJECT: FINAL REPORT

Purpose

This report summarizes the findings of the PREP project, which had as its objectives the development, implementation and formative evaluation of physical activity curriculum materials and instructional methods for young, moderately mentally handicapped children. (See also The PREP Play Program.)

Design

The researchers developed a program model and conducted a pilot study at Avonmore School in Edmonton. Following that pilot project, the program model was modified. Further field testing then took place at Avonmore and St. Matthew schools in Edmonton; this stage included in-service training, program implementation and evaluation.

Findings

During the implementation period, 19 of the 22 subjects improved in at least one physical skill, and 14 of the 22 pupils improved on two or more of the play skills. Teachers were in total agreement that the PREP program model was very effective, and many reported that the task sequence approach used here also helped them in teaching cognitive skills to these children.

Recommendations

1. The PREP program should be considered for inclusion in the physical education curriculum for young moderately mentally handicapped children throughout the province.
2. Inservice training program should be developed to distribute the PREP program materials and methods to teachers who may wish to use it.
3. The PREP program should be increased to include higher level motor skills that would be appropriate for older moderately mentally handicapped children.
4. Research on the analysis of individualized instruction in play skills and methods to improve the instructional skills of teachers should be continued.
5. The audio-visual aids and program materials developed through this project should be distributed through existing agencies to those teachers who wish to use them.

Bibliographic Information

A. E. Wall, E. J. Watkinson, D. M. Shatz and C. Castle,
PREP Program Field Testing Project: Final Report, Alberta Education, 1980. 111 pages.

Distribution

The report will be sent to Alberta superintendents of schools, and to libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, faculties of education in Alberta, the ERIC document service and Micromedia.

PUBLIC REACTION TO RECOMMENDATIONS OF THE MINISTER'S
ADVISORY COMMITTEE ON STUDENT ACHIEVEMENT

Purpose

This report summarizes and interprets trends in the responses of individual citizens and interest groups to the recommendation of the Minister's Advisory Committee on Student Achievement (MACOSA).

Design

The Minister's Representative, Dr. Gordon Mowat, received and analyzed the briefs submitted and arranged public hearings throughout the province. Dr. Mowat also carried out a survey of public opinion using the random sampling approach.

Findings and Conclusions

The briefs and hearings produced two strains of thought. First, both groups and individuals repeatedly stressed the need for provincial standards, for provincial long-term monitoring of achievement, and for some basis on which local achievement levels could be compared with provincial achievement levels. Second, associations representing trustees, teachers, parents, labour and business opposed the return of mandatory departmental examinations in grade 12, but supported in principle the development of a province-wide system of achievement testing.

The public opinion survey also indicated support for stronger provincial government involvement in setting standards and measuring achievement.

Bibliographic Information

G. L. Mowat, Public Reaction to the Recommendations of the Minister's Advisory Committee on Student Achievement, Alberta Education, December 1979. 59 pages.

Distribution

The report was distributed to all Alberta schools, school superintendents, board chairmen, and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, faculties of education in Canada, the ERIC document service and Micromedia.

ROCKY MOUNTAIN HOUSE FRENCH IMMERSION CAMP:
A PROCESS ANALYSIS

Purpose

The report describes and assesses the implementation process of the Rocky Mountain House French Immersion Camp (May 1979), and generates guidelines for future language immersion camps.

Design

To collect data the researchers used the following research instruments:

1. L2 Second Language System (McEwen, 1976).
2. School Subjects Attitudes Scales (Nyberg and Clarke, 1979).
3. Interaction Checklist.
4. Student questionnaire.
5. Monitor and Teacher questionnaire.

The last three instruments were developed specifically for this study.

Findings

The activities at the five-day camp, other than meals, were fairly evenly divided into four categories: educational, cultural, recreational and social.

Observations indicated that instruction periods tended to be monitor-directed while evaluation periods tended to be more student-directed.

The three most highly rated activities were the talent night and banquet, free time and afternoon (recreational) activities. Rated as most difficult yet most useful were the evaluation and instruction periods and mealtimes. Students perceived themselves as having progress in their linguistic skills during the camp.

Conclusions and Recommendations

For use by future planners of similar immersion camps, the researchers drew up a set of guidelines based on Stake's Model

(1967). Conclusions were drawn with respect to goal emphasis, balance between learning and leisure activities, advance preparation of students, scheduling and optimal use of monitors.

Bibliographic Information

McEwen, N. et al., Rocky Mountain House French Immersion Camp: A Process Analysis, Alberta Education, May 1980. 108 pages.

Distribution

The report was distributed to school superintendents and senior high school principals in Alberta, Alberta universities, and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, ERIC Document Services and Micromedi .

SENSORY MULTIHANDICAPPED PROGRAM PLANNING PROJECT

Purpose

This project planned a comprehensive program for the education and development of children who are sensory multihandicapped (deaf-blind, deaf with other handicaps, or blind with other handicaps).

Design

In order to prepare this report, the project team reviewed the literature, visited sites serving the sensory multihandicapped in North America, communicated in writing with such services (individuals and agencies) outside North America, solicited briefs from the Alberta public, held discussions with public and private agencies serving the sensory multihandicapped in Alberta, and drew upon the resources of a number of consultants.

Findings and Conclusions

The project team concluded that the government of Alberta should implement educational, residential, resource and support services for the sensory multihandicapped in Alberta, and they set down guidelines for this implementation.

Recommendations

Recommendations of the project were as follows:

1. That an Interdepartmental Commission be established to:
(a) monitor budget, policy, and priorities related to the delivery of services, and (b) administer the funding for services to the sensory multihandicapped in Alberta;
2. That regional resource centers be developed in Edmonton and Calgary to provide specialized support and resource services;
3. That an agreement be entered into between the government of Alberta and the Calgary Board of Education and the Edmonton Public School Board, whereby the two school jurisdictions would provide educational programs to deaf-blind, blind multihandicapped and deaf multihandicapped children who are sponsored by local school jurisdictions;
4. That residential accommodation be made available as required; and

5. That sufficient training facilities for staff for sensory multihandicapped programs be ensured.

Bibliographic Information

H. Finnestad and H. J. McLeod, Sensory Multihandicapped Program Planning Project, Alberta Education, October 1979. Technical Report, 257 pages.

Distribution

The report was distributed to superintendents of schools in Alberta, to Alberta universities, and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, ERIC Document Services and Micromedia.

TEACHER INSERVICE TRAINING COSTS: A STAFF STUDY

Purpose

This study was primarily intended to: (a) gauge the dollar costs to Alberta school boards of instructional staff inservice activities, and (b) provide a preliminary measure of probable dollar costs (re: inservice) of instituting new province-wide curricular programs.

Design

Estimates of school boards' current expenditures for teacher inservice were obtained from Alberta Education and from a sample of nine school jurisdictions. After a review of the literature, the researchers described three viable inservice alternatives for the introduction of new programs and determined the costs of each alternative.

Conclusions

1. Province-wide expenditures on teacher professional development and inservice education were estimated in five dimensions: direct and indirect expenditures by school authorities, Alberta Education expenditures, expenditures by teachers and the ATA, and expenditures by an illustrative sample of school authorities on professional development and inservice.
2. The literature showed that traditional approaches to inservice education should be revised to focus more closely on the needs of teachers.
3. The three alternatives for the introduction of new programs were: (a) production and distribution by Alberta Education and implementation by local systems, (b) complete responsibility assumed by Alberta Education, and (c) assistance to local school systems by Alberta Education. Alternative A is the least costly, Alternative B is the most costly and would perhaps be least successful because of the "top-down" approach and Alternative C, although it has many advantages, is also costly. Key factors in choosing an alternative appeared to be fiscal control and ensuring long-term adoption of the programs through local participation.

Bibliographic Information

B. H. Fennell, et al., Teacher Inservice Training Costs: A Staff Study, Alberta Education, March 1980. 33 pages.

Distribution

This report was sent to school superintendents and school board chairmen in Alberta, Alberta universities, Alberta MLA's and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, ERIC Document Services and Micromedia.

WORK EXPERIENCE EDUCATION PROGRAM EFFECTIVENESS AND ORGANIZATION

Purpose

This study was designed to gather perceptual data from students, coordinators and supervisors involved in Work Experience Education.

Design

The researcher designed two questionnaires to obtain information on: (a) the priorities and perceived attainment of benefits of Work Experience, and (b) selected organizational variables. The Stake evaluation model (1967) was used in this study.

Findings and Conclusions

The researcher was able to identify some differences among students' supervisors and coordinators both in their priorities and their perceived attainment of benefits. Overall data suggested a moderate to highly effective program--since many items stated as priorities were perceived to be attained, and since the various groups involved frequently agreed on these matters.

The researcher rated various aspects of the school-sponsor relationship in the low to moderate range, as interaction procedures were often not clearly defined as part of the program and communication was relatively infrequent. The research also drew several detailed conclusions about the inter-relationship of the various program aspects studied.

Recommendations

The report recommends that work experience program integration be improved through increased contributions by both sponsors and schools and through increased communication between these groups. It also recommends that the formal roles of each group and individual involved be more clearly specified, that more resources be provided, and that school coordinators spend more time with students and supervisors on the job site.

Bibliographic Information

R. D. Germscheid, Work Experience Education Program Effectiveness and Organization, Alberta Education, June 1980. 37 pages.

Distribution

The report was sent to school superintendents, senior high school principals, and Work Experience coordinators in Alberta, Alberta universities, faculties of Education in Canada, and to the libraries of the Alberta Teachers' Association, Alberta School Trustees' Association, Regional Offices of Education, ERIC Document Services and Micromedia.